

Managing Incidental Findings from Educational Ultrasound: Best Practice Guidelines from a Scottish Medical School

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1. Background

The serendipitous discovery of potential **incidental findings** (IFs) in **student volunteers**, participating in ultrasound sessions as peer models for demonstration purposes, or **simulated patients**, participating in clinical skills sessions not only limited to ultrasound scanning, is an important aspect not to be neglected. As educationalists, it is our professional and ethical duty to have processes in place for the management of IFs.

What are incidental findings?

“unexpected findings with potential health implications, that also include false positives most likely resulting from ultrasound artefacts, identified on the person being scanned”¹

3. Follow Up Analysis

As the policy has been implemented since September 2017, we sought additional ethical approval to explore the incidence of IFs amongst student volunteers and simulated patients as a follow up study (MD14156).

4. Results

In total, 18 cases have been reported between September 2017 and February 2019 (Table 1).

	Frequency (n)	Percentage (%)
BSc Students	9	50
ScotGEM Students	1	6
Simulated Patients	8	44
Total	18	100

Table 1: Frequency of Incidental Findings

The student **incidence rate** was **1.9%** ranging from **0.6%** (year 1) to **3.4%** (year 3). Incidental findings were most common in year 3 for students (50%) and simulated patients (88%) probably reflecting the higher number of examinations at later stages of the curriculum (Fig 2, 3).

References

1. Varsou O. The use of ultrasound in educational settings: what should we consider when implementing this technique for visualisation of anatomical structures?. In: Rea, P. M. (ed.), Biomedical Visualisation Volume 3 (1156). Series: Advances in Experimental Medicine and Biology. Springer Nature 2019. ISBN 978-3-030-19384-3. doi: 10.1007/978-3-030-19385-0_1.
2. School of Medicine Handbook. Management of incidental findings in BSc (hons) medicine practical sessions [online]. University of St Andrews School of Medicine 2019. Available from: http://medhandbook.st-andrews.ac.uk/wp-content/uploads/sites/27/2017/10/UG-teaching_management-of-teaching_incidental-findings-BSc-Hons.pdf [accessed 17 June 2019].

2. Purpose

We have produced best practice guidelines as a **written** policy including consent processes, debriefing sessions, and our role as teachers in this context.² Our aim was to ensure that a **standardised mechanism** (Fig 1) is in place at the University of St Andrews School of Medicine for the management of IFs. This process was independently reviewed by the School’s ethics committee (MD13175).

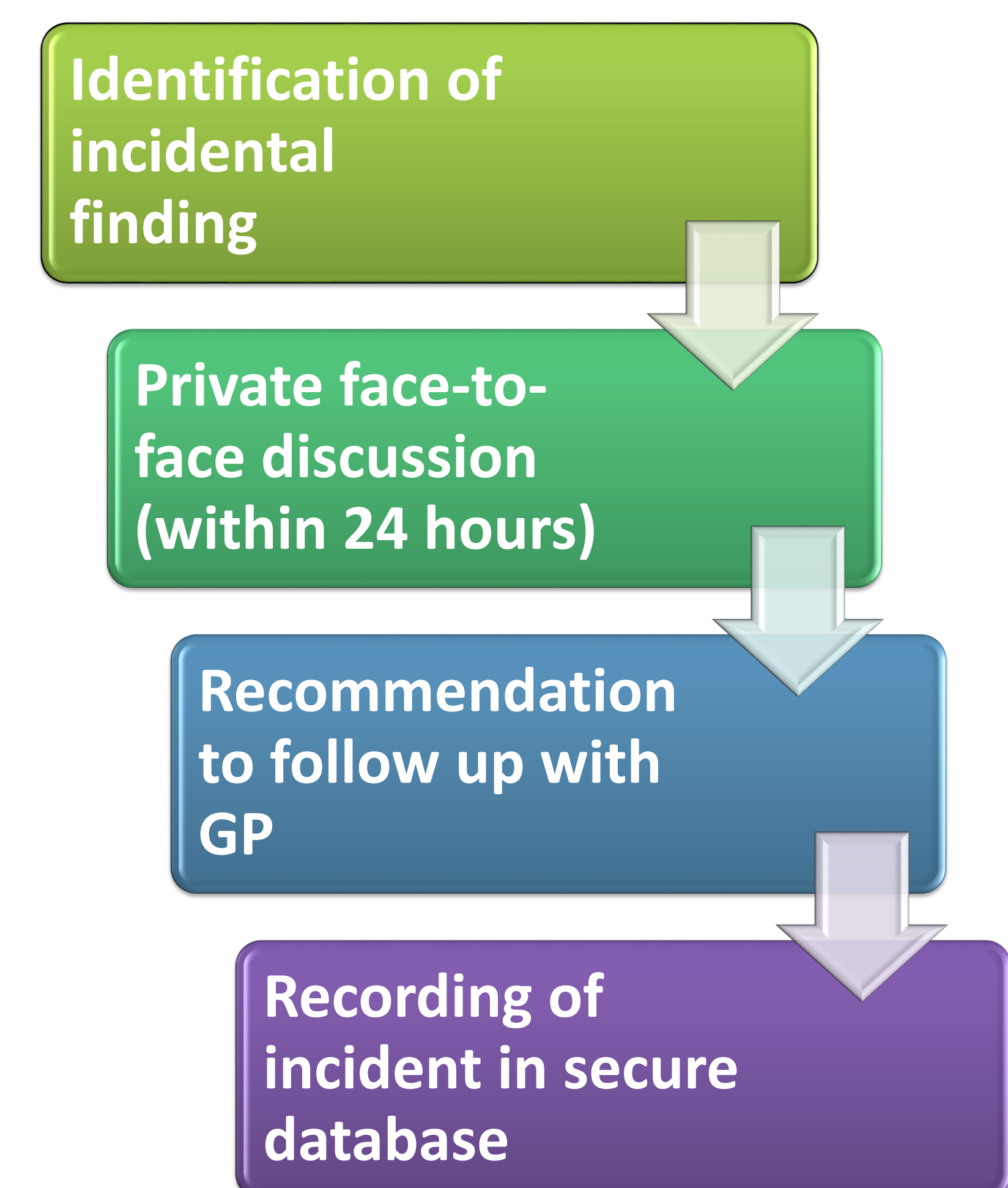


Figure 1: Flow Chart for the Management of Incidental Findings

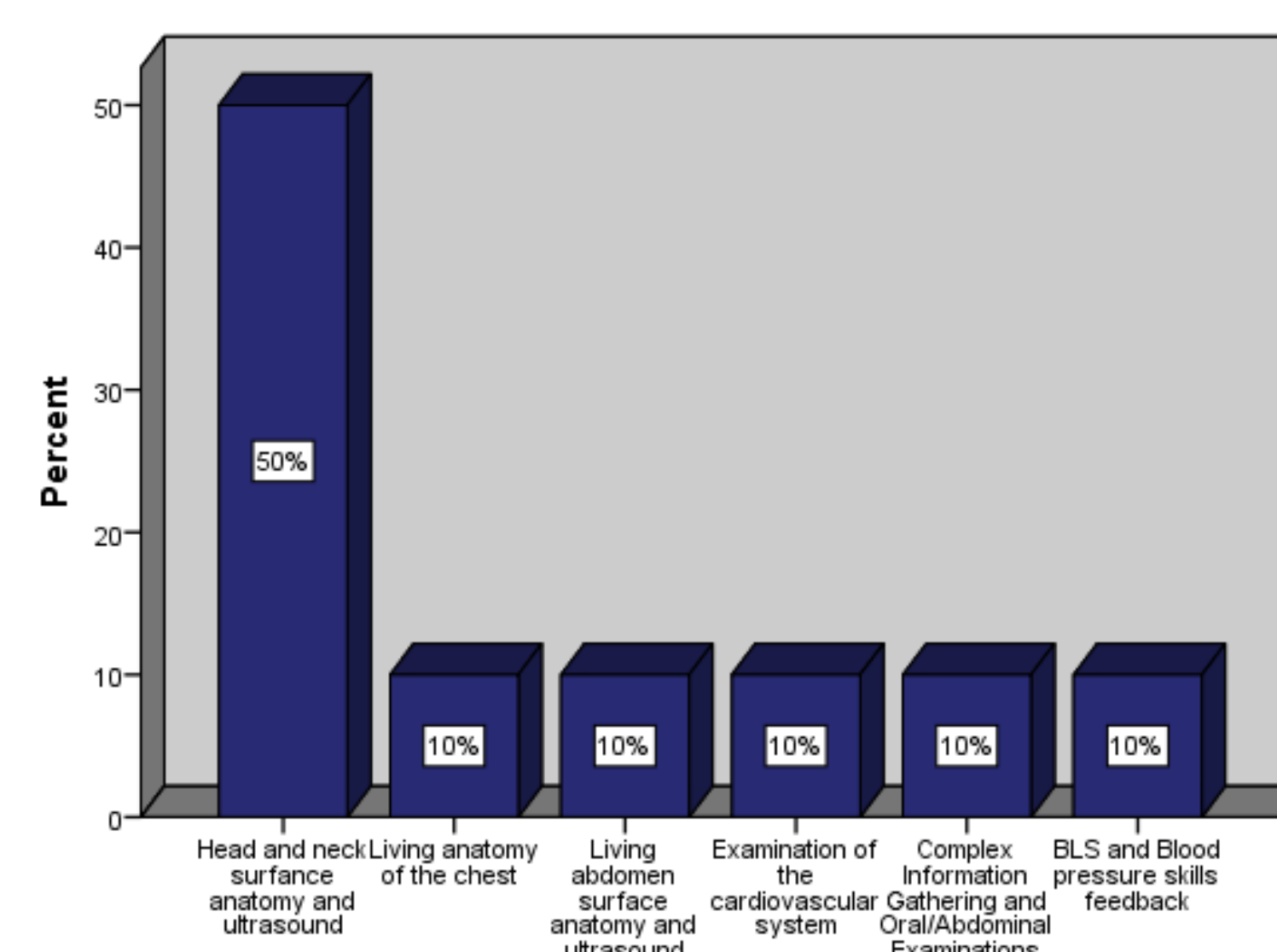
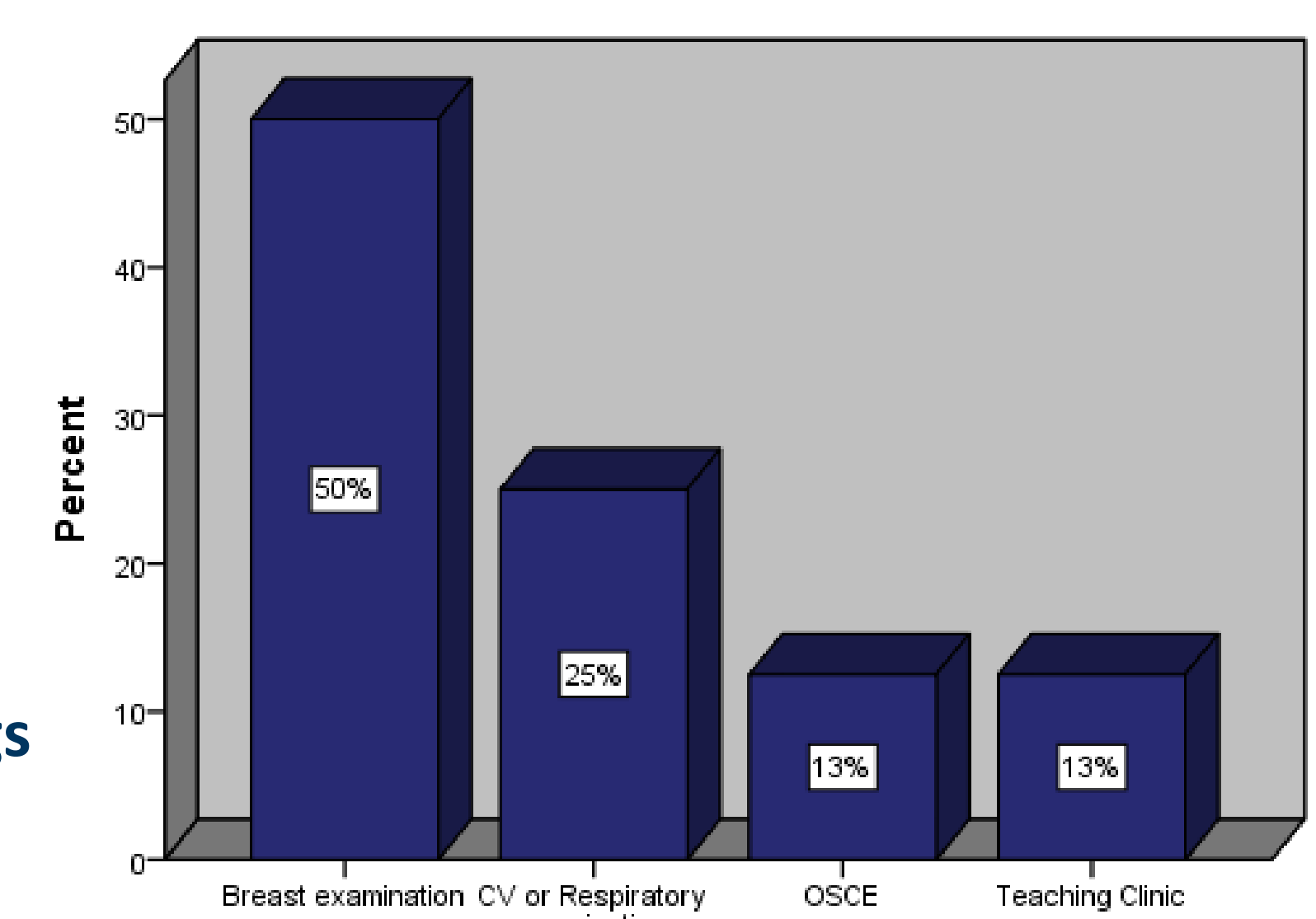


Figure 2: Incidental Findings in Students

Figure 3: Incidental Findings in Simulated Patients



5. Take-Home Messages

- ❑ Considering the overall incidence rate, IFs were not common in this institution.
- ❑ The written guidelines have standardised the management of IFs throughout all clinical skills sessions.
- ❑ Consensus recommendations, from a multidisciplinary panel of experts, are needed with the aim of standardising IF mechanisms across all institutions.¹